

WHAT IS CLAIMED IS:

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1. A motor drive circuit, comprising:

a first transistor;

a second transistor whose collector is connected
to an emitter of said first transistor in series;

10 a motor connected to a connection point between
said first and second transistors;

a first brake control circuit that turns off
said first transistor and turns on said second transistor
in accordance with a brake operation instruction signal;

15 and

a second brake control circuit that forces said
first transistor to be turned OFF in accordance with the
brake operation instruction signal independently from said
first brake control circuit.

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2. The motor drive circuit as claimed in claim 1,

25 wherein the first transistor controls supplying of a drive
current to the motor, and

the second transistor controls drawing of the
drive current from the motor.

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3. The motor drive circuit as claimed in claim 2,

wherein the first and second transistors are each formed by an NPN transistor, and

the second brake control circuit lowers a base potential of said first transistor.

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4. The motor drive circuit as claimed in claim 3,
10 wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors and the motor and a base of the first transistor; and

a control circuit that turns ON said switching
15 element in accordance with the brake operation instruction signal.

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5. The motor drive circuit as claimed in claim 2, wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors
25 and the motor and a base of the first transistor; and

a control circuit that turns ON said switching element in accordance with the brake operation instruction signal.

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6. The motor drive circuit as claimed in claim 1,

wherein the first and second transistors are each formed by an NPN transistor, and

the second brake control circuit lowers a base potential of said first transistor.

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7. The motor drive circuit as claimed in claim 6,
10 wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors and the motor and a base of the first transistor; and

a control circuit that turns ON said switching
15 element in accordance with the brake operation instruction signal.

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8. The motor drive circuit as claimed in claim 1,
wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors
25 and the motor and a base of the first transistor; and

a control circuit that turns ON said switching element in accordance with the brake operation instruction signal.

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9. A motor drive method applied to a motor drive

circuit in which a motor is connected to a connection point between a first transistor and a second transistor, and an emitter of said first transistor and a collector of said second transistor are connected in series, said motor
5 drive method comprising the steps of:

turning OFF said first transistor and turning ON said second transistor in accordance with a brake operation instruction signal; and

forcing said first transistor to be turned OFF
10 in accordance with the brake operation instruction signal.

15 10. The motor drive method as claimed in claim 9, wherein the first transistor controls supplying of a drive current to the motor, and
the second transistor controls drawing of the drive current from the motor.

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11. The motor drive method as claimed in claim
25 10, wherein the first and second transistors are each formed by an NPN transistor, and
the step of forcing the first transistor to be turned OFF is performed by lowering a base potential of the first transistor.

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12. The motor drive method as claimed in claim
11, wherein the step of forcing the first transistor to be
turned OFF is performed by turning ON a switching element
that is provided between the connection point between the
5 first and second transistors and the motor and a base of
the first transistor in accordance with the brake
operation instruction signal.

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13. The motor drive method as claimed in claim
10, wherein the step of forcing the first transistor to be
turned OFF is performed by turning ON a switching element
15 that is provided between the connection point between the
first and second transistors and the motor and a base of
the first transistor in accordance with the brake
operation instruction signal.

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14. The motor drive method as claimed in claim 9,
wherein the first and second transistors are each formed
25 by an NPN transistor, and

the step of forcing the first transistor to be
turned OFF is performed by lowering a base potential of
the first transistor.

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15. The motor drive method as claimed in claim

14, wherein the step of forcing the first transistor to be
turned OFF is performed by turning ON a switching element
that is provided between the connection point between the
first and second transistors and the motor and a base of
5 the first transistor in accordance with the brake
operation instruction signal.

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16. The motor drive method as claimed in claim 9,
wherein the step of forcing the first transistor to be
turned OFF is performed by turning ON a switching element
that is provided between the connection point between the
15 first and second transistors and the motor and a base of
the first transistor in accordance with the brake
operation instruction signal.